REMARKS

I. INTRODUCTION

Receipt of the final Office Action dated April 15, 2009 is acknowledged. In the Action, claims 1, 12 and 25 are rejected as allegedly obvious over Treon *et al.*, *Semin. Oncol.*, 27:598 (2000) ("Treon"), in view of Ohtomo *et al.*, *Biochem. Biophys. Res. Comm.*, 258:583 (1999) ("Ohtomo") and Chiriva-Internati *et al.*, *Cancer Gene Therapy*, 8(Suppl 2):S27 (2001) ("Chiriva-Internati"). Claims 1, 3, 12, 23 and 25 are also rejected as allegedly obvious over Treon, in view of Ohtomo and Chiriva-Internati, and further in view of WO 200177362 and Porgador *et al.*, *J. Exp. Med.*, 182:255 (1995) ("Porgador").

Applicants thank the Examiner for her efforts in examining this application and respectfully request reconsideration of the application in view of the foregoing amendments and in view of the reasons that follow.

II. STATUS OF THE CLAIMS

In this response, new claim 32 is added. Support for the new claim can be found throughout the specification, and in paragraph [0022] and Example 1, in particular. Upon entry of this amendment, claims 1, 3, 12, and 23-32 are pending.

The foregoing amendments do not introduce new matter.

III. CLAIM REJECTIONS UNDER 35 U.S.C. § 103

The claims are rejected under 35 U.S.C. 103 as allegedly obvious over Treon, in view of Ohtomo and Chiriva-Internati (claims 1, 12 and 25), and as allegedly obvious over Treon, in view of Ohtomo and Chiriva-Internati, and further in view of WO 200177362 and Porgador (claims 1, 3, 12, 23 and 25). Applicants respectfully disagree and traverse these grounds for rejection.

The present invention describes a dendritic cell directly pulsed by an HM1.24 protein or HM1.24 peptide. Immune reactions in the immunotherapy of cancer include an immune reaction by an antibody reaction and immune reaction by T cells, and these reactions are

completely different in their mechanisms for causing an immune reaction. As can be seen from the description of the specification, the immune reaction of the present invention is one caused by T cells. The different immune reactions in the immunotherapy of cancer are described on page 299, second paragraph of Evans *et al.*, *Q J Med.*, 92:299 (1999), attached as Appendix A.

On the other hand, Chiriva-Internati does not describe a viral vector which expresses an HM1.24 protein that is directly pulsed on dendritic cells.

The Ohtomo reference describes that an HM1.24 antigen is a promising target for antibody-based immunotherapy of multiple myeloma. Therefore, the Ohtomo reference merely suggests that an HM1.24 antigen may be used for immunotherapy using antibody reaction, and this reference does not suggest at all immunotherapy using T cell reaction, of which the mechanism is completely different from that of immunotherapy using antibody reaction.

The Treon reference describes, as a method for treating a plasma cell tumor such as multiple myeloma, an immunotherapy using dendritic cells pulsed with a cancer antigen of a myeloma related peptide. However, as the Office recognized on page 9, lines 4 to 5 in the Office Action dated June 19, 2007, "Treon et al. do not specifically describe dendritic cells pulsed with HM1.24 protein or HM1.24 soluble peptide." In addition, although Treon refers to an HM1.24 antigen, this reference relates to the usefulness of an anti-HM1.24 antibody and does not suggest pulsing dendritic cells with an HM1.24 protein or HM1.24 peptide.

Therefore, even if the Ohtomo reference and the Treon reference motivate a person of ordinary skill in the art to use an anti-HM1.24 antibody for treating multiple myeloma, the prior art does not suggest or reasonably predict that the Ohtomo reference and the Treon reference which describe cancer therapy using antibody reaction, could be successfully combined with the Chiriva-Internati reference which describes a cancer vaccine using T cell reaction because the mechanisms are completely different, to arrive at the presently claimed invention.

In addition, the Chiriva-Internati reference describes that "improvements in T-cell priming by DC might be effected by the delivery of antigen genes into DC, giving continuous protein expression, as most proteins have short half-lives." This description suggests that in introducing protein to dendritic cells, because the half-life of a protein is short, the protein must be continuously expressed, and for this purpose, viral vectors comprising an HM1.24 gene which can continuously express the protein should be used.

Accordingly, the Chiriva-Internati reference suggests the disadvantage of direct use of HM1.24 protein or HM1.24 peptide, which have a rather short half-life. Thus, not only does the prior art not suggest the combination of Chiriva-Internati with Ohtomo and Treon, Chiriva-Internati specifically teaches away from this combination.

Note that because WO 200277362 does not suggest the use of an HM1.24 antigen for immunotherapy using a T cell reaction, the deficiencies in the cited art are not remedied by the teachings in this reference.

Therefore, for at least these reasons, applicants respectfully request the rejections be withdrawn.

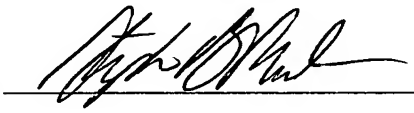
CONCLUSION

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. § 1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date Oct. 14, 2009

By 

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